

Claims

What is claimed is:

- 5 1. An amphiphilic compound comprising:
 - (a) a lipophilic component wherein the lipophilic component is a hydrocarbon group containing about 20 or more carbon atoms;
 - (b) a hydrophilic component wherein the hydrophilic component is selected from at least one the group consisting of:
 - 10 (i) a monomer or an oligomer of an oxyalkylene group containing 2 or more carbon atoms or derivatives thereof;
 - (ii) a monomer or an oligomer of an oxyalkylene group containing 3 or more carbon atoms or derivatives thereof;
 - (iii) an oligomer comprising:
 - 15 (1) an oxyalkylene group containing 3 or more carbon atoms or derivatives thereof; and
 - (2) an oxyalkylene group containing 2 or more carbon atoms or derivatives thereof, provided component (2) is different from component (1);
 - 20 (iv) a hydroxyamino group or derivatives thereof;
 - (v) a polyhydric alcohol group or derivatives thereof; and
 - (vi) a polyamino group or derivatives thereof; and
 - (c) a linker covalently bonding the hydrophilic component and the lipophilic component, wherein the hydrophilic component is present in an amount sufficient to at least partially disperse the amphiphilic compound in water.
- 25 2. The amphiphilic compound of claim 1, wherein the lipophilic component is a hydrocarbon group containing about 30 or more carbon atoms.
- 30 3. The amphiphilic compound of claim 1, wherein the lipophilic component is a polyolefin.

4. The amphiphilic compound of claim 3, wherein the polyolefin is polyisobutylene or mixtures thereof.

5. The amphiphilic compound of claim 4, wherein the polyisobutylene average number molecular weight is at least about 250.

6. The amphiphilic compound of claim 1, wherein the amount of the amphiphilic compound partially dispersed in water can be equal to or greater than about 0.01 wt % of the amphiphilic compound dispersed in water at 25°C.

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7. The amphiphilic compound of claim 1, wherein the amount of the amphiphilic compound partially dispersed in water can be equal to or greater than about 0.3 wt % of the amphiphilic compound dispersed in water at 25°C.

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8. The amphiphilic compound of claim 1, wherein the amphiphilic compound has a HLB of about 8 or more.

9. The amphiphilic compound of claim 1, wherein the hydrophilic component further comprises another polar moiety.

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10. The amphiphilic compound of claim 9, wherein the polar moiety is selected from the group consisting of an alcohol, a non-ionic amine, a cationic primary amine, a cationic secondary amine, a cationic tertiary amine, a quaternary amine, an amide, an imide, an alkanolamide, a sarcosinate, a sulphosuccinate, a taurate, a sulphonate, a sulphate, an amine oxide, a poly(oxyalkylene) compound, an ethoxylate, a ketone, a carboxylate, an aldehyde, a glycerol ester, an ester, a 2-acrylomidomethylpropane sulphonic acid, a 2-methacrylomidomethylpropane sulphonic acid, an imidazoline, a phosphate, a phosphonate, a borate, a borane, a silicate, a monoglyceride, a diglyceride, a phosphate ester, a propoxylated acid, a sorbitan, a sucrose ester, a carboxylate salt, a halide, an oxygenated halide, a nitrate, a nitrite, a nitroso compound, a nitramine, a nitro compound, a sulphide, a sulphite, a thiol, an oxygenated sulphur, an azide and mixtures thereof.

11. The amphiphilic compound of claim 10, wherein the polar moiety is selected from the group consisting of 2-acrylomidomethylpropane sulphonic acids, ethoxylates, cationic primary amines, non-ionic amines, bis(2-aminopropyl)ether-Ethylene oxide-propylene oxide copolymers, phosphates, sulphates, sulphonates, carboxylates and mixtures thereof.

5 12. The amphiphilic compound of claim 1, wherein the linker covalently bonding a hydrophilic component and a lipophilic component is an alpha-beta olefinically
10 unsaturated carboxylic acid or reactive equivalents thereof.

15 13. The amphiphilic compound of claim 12, wherein alpha-beta olefinically unsaturated carboxylic acid or reactive equivalents thereof is a derivative of a dicarboxylic acid or mixtures thereof.

14. The amphiphilic compound of claim 13, wherein the dicarboxylic acid is maleic anhydride or mixtures thereof.

20 15. The amphiphilic compound of claim 13, wherein the derivative of a dicarboxylic acid is selected from the group consisting of an imide, an amide, a half amide, an ester, a half ester, a metal salt, a half metal salt and mixtures thereof.

16. A process for preparing an amphiphilic compound comprising reacting:

25 (a) a lipophilic reactant present in the range about 6 to about 94 weight percent of the amphiphilic compound; with

 (b) a hydrophilic reactant present in the range about 6 to about 93.9 weight percent of the amphiphilic compound;

 (c) a linker reactant covalently bonding the hydrophilic component and the
30 lipophilic component present in the range about 0.1 to about 30 weight percent of the amphiphilic compound,

wherein the lipophilic reactant contains a hydrocarbon group of about 20 or more carbon atoms; the hydrophilic reactant is selected from at least one of the group consisting of (i) a monomer or an oligomer of an oxyalkylene compound containing 2 or more carbon atoms or derivatives thereof; (ii) a monomer or an oligomer of an oxyalkylene compound containing 3 or more carbon atoms or derivatives thereof; (iii) an oligomer comprising (1) an oxyalkylene compound containing 3 or more carbon atoms or derivatives thereof; and (2) an oxyalkylene group containing 2 or more carbon atoms or derivatives thereof, provided component (2) is different from component (1); (iv) a hydroxyamine or derivatives thereof; (v) a polyhydric alcohol or derivatives thereof; and (vi) a polyamine or derivatives thereof; and wherein the hydrophilic reactant is present in an amount sufficient to at least partially disperse the amphiphilic compound in water.

17. The process of claim 16 further comprising adding a solvent.
18. The process of claim 16 further comprises drying the amphiphilic compound.
19. The process of claim 16 wherein drying is carried out under vacuum.
20. The process of claim 16, wherein the amount of amphiphilic compound partially dispersed in water is equal to or greater than about 0.01 wt % of the amphiphilic compound dispersed in water at 25°C.